

DT15 Rec'd PCT/PTO '3'1 JAN 2005

SEQUENCE LISTING

<110> ALVAREZ, Vernon L.
 GONDA, Matthew A.

 <120> Treatment of Cell Proliferative Disorders with Chlorotoxin

 <130> 51530-5008-WO

 <150> US 60/406,033
 <151> 2002-08-27

 <150> US 60/384,171
 <151> 2002-05-31

 <160> 95

 <170> PatentIn version 3.2

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			20					25					30		

Ala	Asn	Met	Ala	Arg	Lys	Cys	Arg	Glu	Cys	Cys	Gly	Gly	Ile	Gly	Xaa
		35					40					45			

Xaa Lys Cys Phe Gly Pro Gln Cys Leu Cys Asn Arg Ile

8

Met Phe Ala Thr Gln Thr Asp Gly Cys Gly Pro Cys Phe Thr Thr Asp
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Ala Asn Met Ala Arg Lys Cys Arg Glu Cys Cys Gly Gly Ile Gly Lys
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Cys Phe Gly Pro Gln Cys Leu Cys Asn Arg Ile
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Cys	Leu	Cys
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Arg	Asp	Cys	Cys	Gly	Gly	Gly	Lys	Lys	Cys	Phe	Gly	Pro	Gln	Cys	Leu
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Cys	Asn	Arg
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Cys	Leu	Cys
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 20 25 30

Cys

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 <221> MISC_FEATURE
 <222> (31)..(31)
 <223> Xaa can be Gln or Leu

<400> 38

Cys	Xaa	Pro	Cys	Phe	Thr	Thr	Asp	Xaa	Xaa	Xaa	Xaa	Xaa	Lys	Cys	Xaa
1				5					10					15	

Xaa	Cys	Cys	Gly	Gly	Lys	Gly	Lys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
			20				25						30		

<210> 39
 <211> 37
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Toxin consensus sequence

<220>
 <221> MISC_FEATURE
 <222> (1)..(37)
 <223> Xaa can be any amino acid

<400> 39

Met	Cys	Met	Pro	Cys	Phe	Thr	Thr	Asp	Pro	Asn	Met	Ala	Lys	Lys	Cys
1				5					10					15	

Arg	Asp	Cys	Cys	Gly	Gly	Lys	Gly	Xaa	Xaa	Lys	Cys	Phe	Gly	Pro	Gln
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

20

25

30

Cys Leu Cys Asn Arg
35

<210> 40
<211> 35
<212> PRT
<213> Artificial sequence

<220>
<223> Toxin consensus sequence

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa can be Met, Lys or Ser

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa can be His, Pro, or Gln

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa can be Asp, Ala, or Tyr

<400> 40

Arg Cys Xaa Pro Cys Phe Thr Thr Asp Xaa Gln Met Ser Lys Lys Cys
1 5 10 15

Xaa Asp Cys Cys Gly Gly Lys Gly Lys Gly Lys Cys Tyr Gly Pro Gln
20 25 30

Cys Leu Cys
35

<210> 41
<211> 35
<212> PRT
<213> Artificial sequence

<220>
<223> Toxin consensus sequence

<400> 41

Met Cys Met Pro Cys Phe Thr Thr Asp Pro Asn Met Ala Arg Lys Cys
1 5 10 15

Arg Asp Cys Cys Gly Gly Arg Gly Lys Cys Phe Gly Pro Gln Cys Leu
20 25 30

Cys Asn Arg
35

<210> 42
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Pep8-Ctlx

<400> 42

Cys Gly Gly Lys Gly Arg Gly Lys Cys Tyr
1 5 10

<210> 43
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Pep8-SCX1_BUTSI

<400> 43

Cys Gly Gly Lys Gly Lys Gly Lys Cys Tyr
1 5 10

<210> 44
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Pep8-AF079059_2

<400> 44

Cys Gly Gly Ile Gly Lys Cys Phe Gly Pro
1 5 10

<210> 45
<211> 12
<212> PRT
<213> Artificial sequence

<220>
<223> Chlorotoxin Peptide 8 consensus sequence

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa can be Lys or Ile

<400> 45

Cys Gly Gly Xaa Gly Arg Gly Lys Cys Phe Gly Pro
1 5 10

<210> 46

<211> 6

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> Xaa can be Lys or Ile

<400> 46

Cys Gly Gly Xaa Gly Lys
1 5

<210> 47

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Pep8-NJ0361 sequence

<400> 47

Cys Gly Gly Gly Lys Lys Cys Phe Gly Pro
1 5 10

<210> 48

<211> 12

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<400> 48

Cys Gly Gly Lys Gly Lys Gly Lys Cys Phe Gly Pro
1 5 10

<210> 49

<211> 6

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<220>

<221> MISC_FEATURE

<222> (4)..(5)

<223> Xaa can be Lys or Gly

<400> 49

Cys Gly Gly Xaa Xaa Lys

1

5

<210> 50

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Pep8-SCX1_BUTEU sequence

<400> 50

Cys Lys Gly Arg Gly Lys Cys Phe Gly Pro

1

5

10

<210> 51

<211> 12

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<220>

<221> MISC_FEATURE

<222> (3)..(3)

<223> Xaa can be Gly or Cys

<400> 51

Cys Gly Xaa Lys Gly Arg Gly Lys Cys Phe Gly Pro

1

5

10

<210> 52

<211> 6

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<220>

<221> MISC_FEATURE

<222> (2)..(2)

<223> Xaa can be Gly or Lys

<400> 52

Cys Xaa Gly Lys Gly Lys
1 5

<210> 53

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Pep8-SCX5_BUTEU sequence

<400> 53

Cys Gly Gly Asn Gly Lys Cys Phe Gly Pro
1 5 10

<210> 54

<211> 12

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> Xaa can be Lys or Asn

<400> 54

Cys Gly Gly Xaa Gly Arg Gly Lys Cys Phe Gly Pro
1 5 10

<210> 55

<211> 6

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> Xaa can be Lys or Asn

<400> 55

Cys Gly Gly Xaa Gly Lys
1 5

<210> 56
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Pep8-SCXP_ANDMA sequence

<400> 56

Cys Gly Gly Arg Gly Lys Cys Val Gly Pro
1 5 10

<210> 57
<211> 12
<212> PRT
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<220>
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<220>
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<223> Xaa can be Tyr or Val

<400> 57

Cys Gly Gly Lys Gly Arg Gly Lys Cys Xaa Gly Pro
1 5 10

<210> 58
<211> 6
<212> PRT
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<220>
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<400> 58

Cys Gly Gly Lys Gly Lys
1 5

<210> 59
<211> 12
<212> PRT
<213> Artificial sequence

<220>
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<220>
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<222> (4)..(5)
<223> Xaa can be Lys or Gly

<400> 59

Cys Gly Gly Xaa Xaa Arg Gly Lys Cys Phe Gly Pro
1 5 10

<210> 60

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 8 consensus sequence

<400> 60

Cys Gly Gly Lys Gly Lys Cys Phe Gly Pro
1 5 10

<210> 61

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 21 sequence

<400> 61

Thr Thr Asp His Gln Met Ala Arg Lys Cys
1 5 10

<210> 62

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Pep21-SCX1-BUTSI sequence

<400> 62

Thr Thr Asp Pro Gln Met Ser Lys Lys Cys
1 5 10

<210> 63

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 21 consensus sequence

<220>

<221> MISC_FEATURE

<222> (4) .. (4)

<223> Xaa can be His or Pro

<400> 63

Thr	Thr	Asp	Xaa	Gln	Met	Ala	Lys	Lys	Cys
1				5					10

<210> 64

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Pep21-SCX8_LEIQH sequence

<400> 64

Thr	Thr	Asp	Gln	Gln	Met	Thr	Lys	Lys	Cys
1				5					10

<210> 65

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 21 consensus sequence

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> Xaa can be His or Gln

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa can be Ala or Thr

<400> 65

Thr	Thr	Asp	Xaa	Gln	Met	Xaa	Lys	Lys	Cys
1				5					10

<210> 66

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Pep21-AF079059_2 sequence

<400> 66

Thr	Thr	Asp	Ala	Asn	Met	Ala	Arg	Lys	Cys
1				5					10

<210> 67
 <211> 10
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Chlorotoxin Peptide 21 consensus sequence

<220>
 <221> MISC_FEATURE
 <222> (4)..(4)
 <223> Xaa can be His or Ala

<400> 67

Thr	Thr	Asp	Xaa	Asn	Met	Ala	Arg	Lys	Cys
1				5					10

<210> 68
 <211> 10
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Pep21-JN0361 sequence

<400> 68

Thr	Thr	Asp	Pro	Asn	Met	Ala	Asn	Lys	Cys
1				5					10

<210> 69
 <211> 10
 <212> PRT
 <213> Artificial sequence

<220>
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<220>
 <221> MISC_FEATURE
 <222> (4)..(4)
 <223> Xaa can be either His or Pro

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa can be Arg or Asn

<400> 69

Thr	Thr	Asp	Xaa	Asn	Met	Ala	Xaa	Lys	Cys
1				5					10

<210> 70
 <211> 10

<212> PRT
 <213> Artificial sequence
 <220>
 <223> Pep21-SCX1_BUTEU sequence

<400> 70

Thr	Thr	Arg	Pro	Asp	Met	Ala	Gln	Gln	Cys
1				5					10

<210> 71
 <211> 10
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Chlorotoxin Peptide 21 consensus sequence

<220>
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 <222> (3)..(3)
 <223> Xaa can be Asp or Arg

<220>
 <221> MISC_FEATURE
 <222> (4)..(4)
 <223> Xaa can be His or Pro

<220>
 <221> MISC_FEATURE
 <222> (5)..(5)
 <223> Xaa can be Gln or Asp

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa can be Arg or Gln

<220>
 <221> MISC_FEATURE
 <222> (9)..(9)
 <223> Xaa can be Lys or Gln

<400> 71

Thr	Thr	Xaa	Xaa	Xaa	Met	Ala	Xaa	Xaa	Cys
1				5					10

<210> 72
 <211> 10
 <212> PRT
 <213> Artificial sequence

<220>
 <223> Pep21-SCX5_BUTEU sequence

<400> 72

Thr Thr Asp Pro Asn Met Ala Lys Lys Cys
1 5 10

<210> 73

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 21 consensus sequence

<220>

<221> MISC FEATURE

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<223> Xaa can be His or Pro

<400> 73

Thr Thr Asp Xaa Asn Met Ala Lys Lys Cys
1 5 10

<210> 74

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Pep21-SCXP ANDMA sequence

<400> 74

Thr Thr Asp Pro Tyr Thr Glu Ser Lys Cys
1 5 10

<210> 75

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 21 consensus sequence

<220>

<221> MISC FEATURE

<222> (4) . (4)

<223> Xaa can be His or Pro

<220>

<221> MISC_FEATURE

<222> (5) . (5)

<223> Xaa can be Gln or Tyr

<220>

<221> MISC FEATURE

<222> (6) . (6)

<223> Xaa can be Met or Thr

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa can be Ala or Glu

<220>

<221> MISC_FEATURE

<222> (8)..(8)

<223> Xaa can be Arg or Ser

<400> 75

Thr Thr Asp Xaa Xaa Xaa Xaa Xaa Lys Cys
1 5 10

<210> 76

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin Peptide 21 consensus sequence

<400> 76

Thr Thr Asp Pro Asn Met Ala Lys Lys Cys
1 5 10

<210> 77

<211> 7

<212> PRT

<213> Artificial sequence

<220>

<223> Chlorotoxin derivative STP-1

<400> 77

Thr Asp Pro Gln Met Ser Arg
1 5

<210> 78

<211> 10

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide 8 sequences

<400> 78

Gly Gly Lys Gly Arg Gly Lys Ser Tyr Gly
1 5 10

<210> 79

<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 8a sequence

<400> 79

Gly Lys Gly Arg Gly Lys Ser Tyr Gly
1 5

<210> 80
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 8b sequence

<400> 80

Lys Gly Arg Gly Lys Ser Tyr Gly
1 5

<210> 81
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 8c sequence

<400> 81

Gly Arg Gly Lys Ser Tyr Gly
1 5

<210> 82
<211> 10
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 21 sequence

<400> 82

Thr Thr Asp His Gln Met Ala Arg Lys Ser
1 5 10

<210> 83
<211> 8
<212> PRT
<213> Artificial sequence

<220>

<223> Peptide 21b sequence

<400> 83

Asp His Gln Met Ala Arg Lys Ser
1 5

<210> 84

<211> 7

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide 21c sequence

<400> 84

His Gln Met Ala Arg Lys Ser
1 5

<210> 85

<211> 6

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide 21d sequence

<400> 85

Gln Met Ala Arg Lys Ser
1 5

<210> 86

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide 21a-A1 sequence

<400> 86

Ala Asp His Gln Met Ala Arg Lys Ser
1 5

<210> 87

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> Peptide 21a-A2 sequence

<400> 87

Thr Ala His Gln Met Ala Arg Lys Ser

1 5

<210> 88
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 21a-A3 sequence

<400> 88

Thr Asp Ala Gln Met Ala Arg Lys Ser
1 5

<210> 89
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 21a-A4 sequence

<400> 89

Thr Asp His Ala Met Ala Arg Lys Ser
1 5

<210> 90
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 21a-A5 sequence

<400> 90

Thr Asp His Gln Ala Ala Arg Lys Ser
1 5

<210> 91
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 21a-A7 sequence

<400> 91

Thr Asp His Gln Met Ala Ala Lys Ser
1 5

<210> 92
<211> 9

<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 21a-A8 sequence

<400> 92

Thr Asp His Gln Met Ala Arg Ala Ser
1 5

<210> 93
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> Peptide 21a-A9 sequence

<400> 93

Thr Asp His Gln Met Ala Arg Lys Ala
1 5

<210> 94
<211> 9
<212> PRT
<213> Mesobuthus tamulus indicus

<220>
<223> GenBank Accession No. P15229, small toxin

<400> 94

Thr Thr Asp Gln Gln Met Ser Lys Lys
1 5

<210> 95
<211> 9
<212> PRT
<213> Leiurus quinquestriatus hebraeus

<220>
<223> GenBank Accession No. P55966, probable toxin

<400> 95

Thr Thr Asp Pro Gln Met Ser Lys Lys
1 5